

Storm Analysis

As of 07/23/2010 06:00 EDT, water levels across southern Florida are at or near predicted. Wind speeds range from 5 to 22 kts with gusts up to 33 kts seen at Virginia Key and 25 kts seen at Vaca Key. Barometric pressure is decreasing across the region.

Water Level and Meteorological plots available below are updated automatically. Water level predictions relative to Mean Lower Low Water are:

Trident Pier, FL: Next predicted high tides are 2.80 ft (0.85 m) at 07/23/2010 06:21 EDT and 3.95 ft (1.20 m) at 07/23/2010 19:05 EDT.

Naples, FL: Next predicted high tides are 3.17 ft (0.97 m) at 07/23/2010 10:54 EDT and 2.21 ft (0.67 m) at 07/24/2010 01:18 EDT.

Tropical Storm BONNIE QuickLook, POSTED 06:00 EDT 07/23/2010

Virginia Key, FL: Next predicted high tides are 1.95 ft (0.59 m) at 07/23/2010 07:33 EDT and 2.06 ft (0.63 m) at 07/23/2010 20:14 EDT.

Vaca Key, FL: Next predicted high tides are 0.85 ft (0.26 m) at 07/23/2010 11:01 EDT and 0.48 ft (0.15 m) at 07/24/2010 03:16 EDT.

Key West, FL: Next predicted high tides are 1.93 ft (0.59 m) at 07/23/2010 08:34 EDT and 0.95 ft (0.29 m) at 07/23/2010 22:15 EDT.

For additional data, please see the Center for Operational Oceanographic Products & Services website. For more information or archived products and reports, please see the Storm QuickLook Homepage.

Analyst:MPM

SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

TROPICAL STORM BONNIE ADVISORY NUMBER 4

500 AM EDT FRI JUL 23 2010

...BONNIE MOVING FASTER TOWARD SOUTHERN FLORIDA...

LOCATION 24.1N 78.6W, ABOUT 155 MI SE OF MIAMI FLORIDA, ABOUT 165 MI KM ESE OF MARATHON FLORIDA

WATCHES AND WARNINGS

A TROPICAL STORM WARNING IS IN EFFECT FOR...

- * THE NORTHWESTERN BAHAMAS
- * THE FLORIDA EAST COAST FROM DEERFIELD BEACH SOUTHWARD INCLUDING THE ENTIRE FLORIDA KEYS AND FLORIDA BAY...AND ALONG THE WEST COAST OF FLORIDA NORTHWARD TO ENGLEWOOD

A TROPICAL STORM WATCH IS IN EFFECT FOR...

- * THE EAST COAST OF FLORIDA NORTH OF DEERFIELD BEACH TO JUPITER INLET INCLUDING LAKE OKEECHOBEE
- * THE NORTHERN GULF COAST FROM DESTIN FLORIDA TO MORGAN CITY LOUISIANA

A TROPICAL STORM WARNING MEANS THAT TROPICAL STORM CONDITIONS ARE EXPECTED SOMEWHERE WITHIN THE WARNING AREA WITHIN 36 HOURS.

A TROPICAL STORM WATCH MEANS THAT TROPICAL STORM CONDITIONS ARE POSSIBLE WITHIN THE WATCH AREA WITHIN 48 HOURS.

INTERESTS ELSEWHERE ALONG THE NORTHERN GULF COAST SHOULD MONITOR THE PROGRESS OF BONNIE.

FOR STORM INFORMATION SPECIFIC TO YOUR AREA IN THE UNITED STATES...INCLUDING POSSIBLE INLAND WATCHES AND WARNINGS...PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE FORECAST OFFICE.

DISCUSSION AND 48-HOUR OUTLOOK

AT 500 AM EDT THE CENTER OF TROPICAL STORM BONNIE WAS LOCATED NEAR LATITUDE 24.1 NORTH...LONGITUDE 78.6 WEST. LOCATION...24.1N 78.6W; ABOUT 155 MI SE OF MIAMI FLORIDA, ABOUT 165 MI KM ESE OF MARATHON FLORIDA

BONNIE IS MOVING TOWARD THE WEST-NORTHWEST NEAR 18 MPH. THIS MOTION IS EXPECTED TO CONTINUE DURING THE NEXT DAY OR SO. ON THE FORECAST TRACK...THE CENTER OF BONNIE IS EXPECTED TO PASS NEAR OR OVER THE FLORIDA KEYS AND THE SOUTHERN FLORIDA PENINSULA LATER TODAY...AND MOVE OVER THE EASTERN GULF OF MEXICO TONIGHT AND SATURDAY. BONNIE IS FORECAST TO APPROACH THE NORTHERN GULF COAST LATE SATURDAY OR EARLY SUNDAY.

MAXIMUM SUSTAINED WINDS ARE NEAR 40 MPH WITH HIGHER GUSTS. SLOW STRENGTHENING IS POSSIBLE DURING THE NEXT 48 HOURS.

TROPICAL STORM FORCE WINDS EXTEND OUTWARD UP TO 85 MILES FROM THE CENTER.

ESTIMATED MINIMUM CENTRAL PRESSURE IS 1008 MB...29.77 INCHES.

HAZARDS AFFECTING LAND

WIND...TROPICAL STORM CONDITIONS WILL CONTINUE OVER PORTIONS OF THE NORTHWESTERN BAHAMAS THIS MORNING. TROPICAL STORM FORCE WINDS ARE EXPECTED TO SPREAD OVER SOUTHERN FLORIDA AND THE KEYS IN THE WARNING AREA LATER TODAY.

RAINFALL...BONNIE IS EXPECTED TO PRODUCE TOTAL RAIN ACCUMULATIONS OF 1 TO 3 INCHES OVER SOUTH FLORIDA...WITH POSSIBLE ISOLATED MAXIMUM AMOUNTS OF 5 INCHES. ADDITIONAL RAINFALL AMOUNTS OF 1 TO 2 INCHES ARE POSSIBLE OVER THE NORTHWESTERN BAHAMAS.

STORM SURGE...STORM SURGE WILL RAISE WATER LEVELS BY AS MUCH AS 1 TO 2 FEET ABOVE GROUND LEVEL OVER PORTIONS OF THE NORTHWESTERN BAHAMAS...THE FLORIDA KEYS...AND THE SOUTHERN FLORIDA PENINSULA.

TORNADOES...ISOLATED TORNADOES ARE POSSIBLE OVER EXTREME SOUTHERN FLORIDA LATER TODAY.

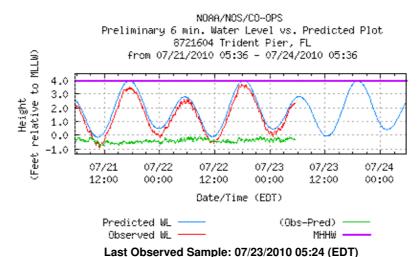
FORECASTER BROWN/LANDSEA

Tropical Storm BONNIE QuickLook, POSTED 06:00 EDT 07/23/2010

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: <u>Trident Pier - Water Level</u>, <u>Trident Pier - Winds</u>, <u>Trident Pier - Barometric</u>, <u>Trident Pier - Air/Water Temp</u>, <u>Virginia Key - Water Level</u>, <u>Virginia Key - Winds</u>, <u>Virginia Key - Barometric</u>, <u>Virginia Key - Air/Water Temp</u>, <u>Vaca Key - Water Level</u>, <u>Naples - Water Level</u>, <u>Naples - Winds</u>, <u>Naples - Barometric</u>, <u>Naples - Air/Water Temp</u>,

Trident Pier, FL - Return to List



Relative to MLLW: Observed: 2.31 ft. Predicted: 2.64 ft. Residual: -0.33 ft. Historical Maximum Water Level: Sep 26 2004, 4.13 ft. above MHHW

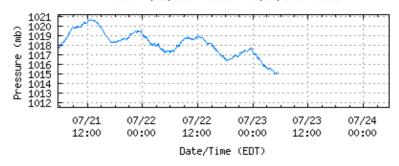
Trident Pier, FL - Return to List

NOAA/NOS/CO-OPS Wind Speed/Gusts/Dir 8721604 Trident Pier, FL from 07/21/2010 05:36 - 07/24/2010 05:36 360 30 (true) speed (knots) 25 270 20 direction 180 15 10 5 07/21 07/22 07/22 07/23 07/23 07/24 12:00 00:00 12:00 00:00 12:00 00:00 Date/Time (EDT) gusts direction

Last Observed Sample: 07/23/2010 05:24 (EDT)
Wind Speed: 7 knots Gusts: 10 knots Direction: 066° T

Trident Pier, FL - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 8721604 Trident Pier, FL from 07/21/2010 05:36 - 07/24/2010 05:36



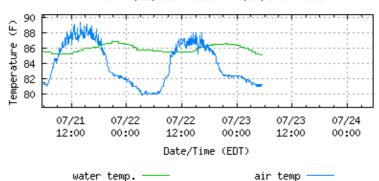
barometric pressure ——

Last Observed Sample: 07/23/2010 05:24 (EDT)

Barometric Pressure: 1015.2 mb

Trident Pier, FL - Return to List

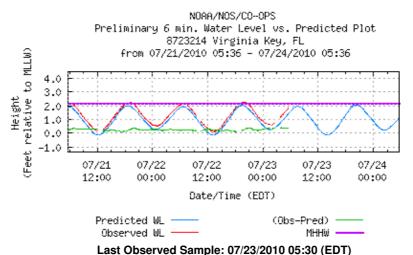
NOAA/NOS/CO-OPS Air/Water Temperature Plot 8721604 Trident Pier, FL from 07/21/2010 05:36 - 07/24/2010 05:36



Last Observed Sample: 07/23/2010 05:24 (EDT)

Water Temperature: 85.1° F Air Temperature: 81.3° F

Virginia Key, FL - Return to List



Relative to MLLW: Observed: 1.81 ft. Predicted: 1.41 ft. Residual: 0.40 ft.
Historical Maximum Water Level: Oct 24 2005, 2.58 ft. above MHHW

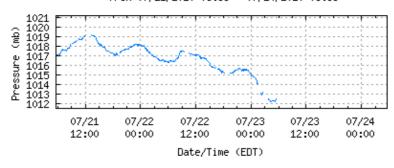
Virginia Key, FL - Return to List

NOAA/NOS/CO-OPS Wind Speed/Gusts/Dir 8723214 Virginia Key, FL from 07/21/2010 05:36 - 07/24/2010 05:36 360 30 (true) speed (knots) 25 270 20 direction 180 15 10 5 07/21 07/22 07/22 07/23 07/24 07/23 12:00 00:00 12:00 00:00 12:00 00:00 Date/Time (EDT) gusts direction

Last Observed Sample: 07/23/2010 05:30 (EDT)
Wind Speed: 10 knots Gusts: 17 knots Direction: 054° T

Virginia Key, FL - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 8723214 Virginia Key, FL from 07/21/2010 05:36 - 07/24/2010 05:36



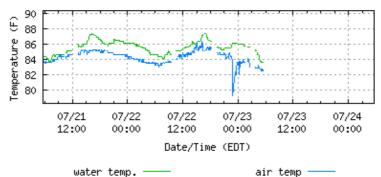
barometric pressure ——

Last Observed Sample: 07/23/2010 05:30 (EDT)

Barometric Pressure: 1012.5 mb

Virginia Key, FL - Return to List

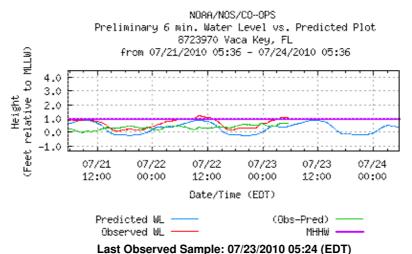
NOAA/NOS/CO-OPS Air/Water Temperature Plot 8723214 Virginia Key, FL from 07/21/2010 05:36 - 07/24/2010 05:36



Last Observed Sample: 07/23/2010 05:30 (EDT)

Water Temperature: 83.7° F Air Temperature: 82.6° F

Vaca Key, FL - Return to List



Relative to MLLW: Observed: 1.06 ft. Predicted: 0.42 ft. Residual: 0.64 ft. Historical Maximum Water Level: Oct 7 1974, 1.42 ft. above MHHW

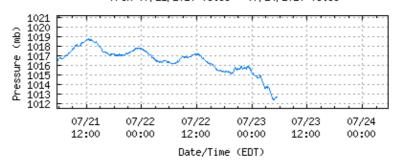
Vaca Key, FL - Return to List

NOAA/NOS/CO-OPS Wind Speed/Gusts/Dir 8723970 Vaca Key, FL from 07/21/2010 05:36 - 07/24/2010 05:36 360 30 (true) speed (knots) 25 270 20 direction 180 15 10 5 07/21 07/22 07/23 07/24 07/22 07/23 12:00 00:00 12:00 00:00 12:00 00:00 Date/Time (EDT) gusts direction

Last Observed Sample: 07/23/2010 05:24 (EDT)
Wind Speed: 11 knots Gusts: 15 knots Direction: 029° T

Vaca Key, FL - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 8723970 Vaca Key, FL from 07/21/2010 05:36 - 07/24/2010 05:36



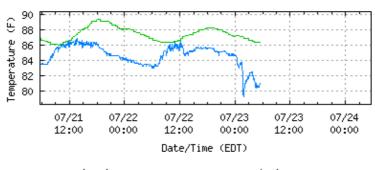
barometric pressure ---

Last Observed Sample: 07/23/2010 05:24 (EDT)

Barometric Pressure: 1012.7 mb

Vaca Key, FL - Return to List

NOAA/NOS/CO-OPS Air/Water Temperature Plot 8723970 Vaca Key, FL from 07/21/2010 05:36 - 07/24/2010 05:36



water temp. — air temp — Last Observed Sample: 07/23/2010 05:24 (EDT)

Water Temperature: 86.4° F Air Temperature: 81.1° F

Key West, FL - Return to List

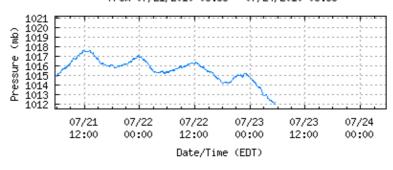
NOAA/NOS/CO-OPS Preliminary 6 min. Water Level vs. Predicted Plot 8724580 Key West, FL Height (Feet relative to MLLW) from 07/21/2010 05:36 - 07/24/2010 05:36 4.0 3.0 2.0 1.0 0.0 -1.0 07/21 07/22 07/22 07/23 07/23 07/24 12:00 12:00 00:00 00:00 12:00 00:00 Date/Time (EDT) Predicted WL (Obs-Pred) Observed WL MHHW

Last Observed Sample: 07/23/2010 05:24 (EDT) Relative to MLLW: Observed: 1.58 ft. Predicted: 1.38 ft. Residual: 0.20 ft.

Historical Maximum Water Level: Sep 8 1965, 1.93 ft. above MHHW

Key West, FL - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 8724580 Key West, FL from 07/21/2010 05:36 - 07/24/2010 05:36

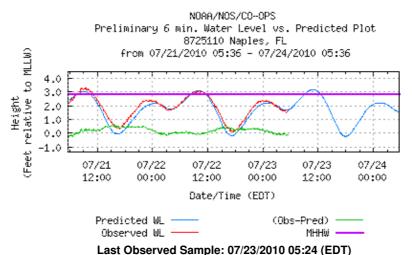


barometric pressure -

Last Observed Sample: 07/23/2010 05:24 (EDT)

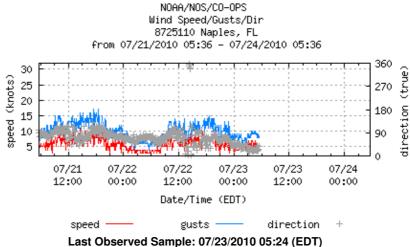
Barometric Pressure: 1012.2 mb

Naples, FL - Return to List



Relative to MLLW: Observed: 1.59 ft. Predicted: 1.68 ft. Residual: -0.09 ft. Historical Maximum Water Level: Dec 21 1972, 3.11 ft. above MHHW

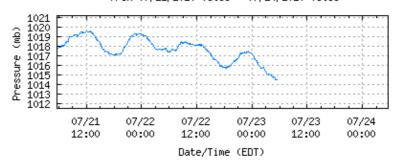
Naples, FL - Return to List



Wind Speed: 5 knots Gusts: 8 knots Direction: 037° T

Naples, FL - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 8725110 Naples, FL from 07/21/2010 05:36 - 07/24/2010 05:36



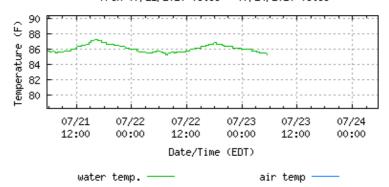
barometric pressure ——

Last Observed Sample: 07/23/2010 05:24 (EDT)

Barometric Pressure: 1014.5 mb

Naples, FL - Return to List

NOAA/NOS/CO-OPS Air/Water Temperature Plot 8725110 Naples, FL from 07/21/2010 05:36 - 07/24/2010 05:36



Last Observed Sample: 07/21/2010 05:36 (EDT)
Water Temperature: 85.8° F Air Temperature: n/a

Tropical Storm BONNIE QuickLook, POSTED 06:00 EDT 07/23/2010

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